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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,118	05/31/2001	Mary Lucille DeLucia	KCC-14,859	9826
35844	7590	01/27/2005	EXAMINER	
PAULEY PETERSEN & ERICKSON 2800 WEST HIGGINS ROAD HOFFMAN ESTATES, IL 60195			ROSSI, JESSICA	
			ART UNIT	PAPER NUMBER
			1733	
DATE MAILED: 01/27/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/871,118	DELUCIA ET AL.	
	Examiner	Art Unit	
	Jessica L. Rossi	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 24-41 is/are pending in the application.
- 4a) Of the above claim(s) 30-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 24-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some * c) ☐ None of:
 - 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. Claims 1-10 and 24-41 are pending. Claims 30-41 remain withdrawn from further consideration.
3. The rejection of claims 1-10 and 24-29 under 35 U.S.C. 112 1st paragraph, as set forth in paragraph 5 of the previous office action, has been withdrawn in light of Applicant's arguments on p. 2-3. Also see interview summary dated 1/14/05.
4. The rejection of claims 1-4, 6-8 and 24-29 under 35 U.S.C. 102(b) as being anticipated by Lorenzi et al. (US 6217889; of record), as set forth in paragraph 7 of the previous office action, has been withdrawn in light of Applicant's arguments on p. 4.
5. The rejection of claims 1, 4-8 and 24-29 under 35 U.S.C. 102(b) as being anticipated by Yoshioka (US 3925127; of record), as set forth in paragraph 8 of the previous office action, has been withdrawn in light of Applicant's arguments on p. 5 and the withdrawal of the 112 1st paragraph rejection as stated in paragraph 3 above.
6. The rejection of claims 1, 4 and 24-26 under 35 U.S.C. 102(b) as being anticipated by Srinivisan (EP 687757; of record), as set forth in paragraph 9 of the previous office action, has been withdrawn in light of Applicant's arguments on p. 6 and the withdrawal of the 112 1st paragraph rejection as stated in paragraph 3 above.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4 and 24-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Jacobs (US 5814178).

**As pointed out by Applicant in the interview summary dated 1/14/05, the claimed 'shrinkage extent' includes a layer that does not shrink at all and therefore is non-shrinkable with a shrinkage extent of zero (p. 12, lines 1-6). Applicant also explained that the claimed 'pore size gradient' is a result of differentially shrinking a fibrous non-woven web (i.e. spunbonded, meltblown, etc.) and porous film that are bonded to each other at discrete locations wherein the non-woven layer does not shrink at all or the non-woven layer shrinks to a lesser extent than the film layer (p. 15, lines 3-6; p. 20, lines 10-11; p. 22, lines 5-18).*

With respect to claim 1, Jacobs is directed to a method for producing a structured composite material for accomodating passage of fluids (note both liquids and gases are considered 'fluids' – see Dictionary; composite of Jacobs is water vapor permeable and therefore passes 'fluids' therethrough - column 7, lines 50-62). The reference teaches the composite material being useful for a variety of applications including diapers, sanitary napkins, disposable garments, etc. (column 9, lines 37-45; column 12, lines 15-17).

The reference teaches forming a non-woven web layer 64 (spunbonded, meltblown, etc.) having a first shrinkage extent (column 3, lines 17-20 and 44-46; column 4, lines 9-11), forming

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a second porous film layer 66 having a shrinkage extent different from the first shrinkage extent (column 3, lines 30-35; column 7, lines 50-62), bonding the non-woven and film together at discrete locations (column 4, lines 56-64), and shrinking both the non-woven and film wherein the non-woven shrinks to a lesser extent than the film such that the non-woven moves in a plane generally perpendicular to the composite material to produce the structured composite material (Figure 2; column 5, lines 63-66; column 6, lines 6-11).

Therefore, the skilled artisan would have appreciated that the shrinking step of Jacobs, like that of the present invention, would produce a structured composite having a pore size gradient in a z-direction wherein movement of the non-woven in the plane generally perpendicular to the composite forms a plurality of fiber loop pores and the film forms a plurality of pores smaller than the fiber loop pores.

Regarding claim 2, Jacobs teaches the non-woven comprising polypropylene and the film comprising an ethylene-propylene copolymer (column 10, lines 35-39 and 50-51).

Regarding claim 3, Jacobs teaches the film shrinking relative to the non-woven (column 6, lines 5-11).

Regarding claim 4, Jacobs teaches heating to shrink (column 5, lines 24-26).

With respect to claim 24, all the limitations were addressed above with respect to claims 1 and 4.

Regarding claim 25, Jacobs teaches the non-woven shrinking relative to the film (column 4, lines 9-11; column 5, lines 63-66; column 6, lines 5-11).

Regarding claim 26, this limitation was addressed above with respect to claim 3.

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With respect to claim 27, all the limitations were addressed above with respect to claims 1 and 4 except creping the non-woven. The skilled artisan would have appreciated that creping of the non-woven takes place during the shrinking step (Figure 2; column 5, lines 24-26; column 6, lines 5-11).

Regarding claim 28, Jacobs teaches stretching the film layer before applying it to the non-woven (column 6, lines 47-49).

Regarding claim 29, Jacobs teaches pattern embossing the non-woven to form thermal bonds that extend through the non-woven (column 4, lines 60-63).

9. Claims 1, 3-4 and 24-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Zelazoski et al. (GB 2284786; of record).

**As pointed out by Applicant in the interview summary dated 1/14/05, the claimed 'shrinkage extent' includes a layer that does not shrink at all and therefore is non-shrinkable with a shrinkage extent of zero (p. 12, lines 1-6). Applicant also explained that the claimed 'pore size gradient' is a result of differentially shrinking a fibrous non-woven web (i.e. spunbonded, meltblown, etc.) and porous film that are bonded to each other at discrete locations wherein the non-woven layer does not shrink at all or the non-woven layer shrinks to a lesser extent than the film layer (p. 15, lines 3-6; p. 20, lines 10-11; p. 22, lines 5-18).*

With respect to claim 1, Zelazoski is directed to a method for producing a structured composite material for accomodating passage of fluids (note both liquids and gases are considered 'fluids' – see Dictionary; composite of Zelazoski is liquid permeable - p. 1, lines 10-20 and p. 14, lines 10-15). The reference teaches the composite material being useful for a

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variety of applications including diapers, sanitary napkins, disposable garments, etc. (p. 1, lines 10-12).

The reference teaches forming a non-woven web layer 14 (spunbonded, meltblown, etc.) having a first shrinkage extent (p. 9, lines 24-28, p. 10, lines 18-24, p. 14, line 19 – p. 15, line 15), forming a second porous film layer 12 having a shrinkage extent different from the first shrinkage extent (p. 5, lines 31-32, p. 3, lines 10-20, p. 4, lines 3-26, p. 14, line 19 – p. 15, line 15), bonding the non-woven and film together at discrete locations (p. 5, lines 31-35), and shrinking at least one of the non-woven and film such that the non-woven moves in a plane generally perpendicular to the composite material to produce the structured composite material (p. 14, line 20 – p. 15, line 15).

Therefore, the skilled artisan would have appreciated that the shrinking step of Zelazoski, like that of the present invention, would produce a structured composite having a pore size gradient in a z-direction wherein movement of the non-woven in the plane generally perpendicular to the composite forms a plurality of fiber loop pores and the film forms a plurality of pores smaller than the fiber loop pores.

Regarding claim 3, Zelazoski teaches the film shrinking relative to the non-woven (p. 14, line 19 – p. 15, line 15).

Regarding claim 4, Zelazoski teaches heating to shrink (p. 15, lines 1-15).

With respect to claim 24, all the limitations were addressed above with respect to claims 1 and 4.

Regarding claim 25, Zelazoski teaches the non-woven shrinking relative to the film (p. 14, line 19 – p. 15, line 15).

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Regarding claim 26, this limitation was addressed above with respect to claim 3.

With respect to claim 27, all the limitations were addressed above with respect to claims 1 and 4 except creping the non-woven. The skilled artisan would have appreciated that creping of the first layer takes place during the shrinking step (p. 14, lines 10-15).

Regarding claim 28, Zelazoski teaches stretching the film layer before applying it to the non-woven (p. 14, line 19 – p. 15, line 15).

Regarding claim 29, Zelazoski teaches pattern embossing the non-woven to form thermal bonds that extend through the non-woven (p. 10, lines 1-3).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 5-10 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs in view of Lorenzi et al. (US 6217889; of record).

With respect to claim 5, all the limitations were addressed above with respect to claim 1 except creping the composite.

It is known in the art to make a fluid-permeable structured composite from non-woven and film layers wherein the individual layers are creped and then combined with other creped or un-creped layers or to crepe multi-layered articles after the individual layers are combined, as taught by Lorenzi (refer to previous office action for complete discussion; specifically, column 17, lines 56-63).

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Therefore, it would have been obvious to the skilled artisan at the time the invention was made to crepe the composite material of Jacobs because such is known in the art, as taught by Lorenzi, wherein creping provides bulk, softness, enhanced ability to remove dirt, enhanced transport of air and water, compressive resiliency, and a visually pleasing appearance (Lorenzi; column 17, lines 56-60).

Regarding claim 6, all the limitations were addressed above with respect to claim 1 except creping the non-woven before it is bonded to the film. It would have been obvious to the skilled artisan at the time the invention was made to crepe the non-woven of Jacobs before bonding it to the film because such is known in the art, as taught by Lorenzi, wherein creping provides bulk, softness, enhanced ability to remove dirt, enhanced transport of air and water, compressive resiliency, and a visually pleasing appearance (Lorenzi; column 17, lines 56-60).

Regarding claim 7, Jacobs teaches such (column 4, lines 56-65).

Regarding claim 8, Jacobs teaches stretching the film layer before bonding it to the non-woven (column 6, lines 47-49).

Regarding claims 9-10, Jacobs teaches stretching the film in a machine direction to about 1 to 6 times its original length (column 4, lines 43-45).

With respect to claims 27-29, if it is not taken that Jacobs teaches creping the first layer, as set forth by the examiner in paragraph 8 above, it would have been obvious to the skilled artisan at the time the invention was made to crepe the non-woven of Jacobs because such is known in the art, as taught by Lorenzi, wherein creping provides bulk, softness, enhanced ability to remove dirt, enhanced transport of air and water, compressive resiliency, and a visually pleasing appearance (Lorenzi; column 17, lines 56-60).

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12. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zelazoski et al. as applied to claim 1 above and further in view of Jacobs.

Regarding claim 2, Zelazoski teaches the non-woven comprising polypropylene (p. 11, lines 22-24) but is silent as to the film comprising ethylene-propylene copolymer. However, the reference teaches the film comprising copolymers of polyolefins (p. 6, lines 19-21) and therefore it would have been obvious to use a film comprising an ethylene-propylene copolymer because such is known in the art, as taught by Jacobs (column 7, lines 25-27), wherein such a material can be rendered shrinkable.

13. Claims 5-10 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zelazoski et al. in view of Lorenzi et al.

With respect to claim 5, all the limitations were addressed above with respect to claim 1 except creping the composite.

It is known in the art to make a fluid-permeable structured composite from non-woven and film layers wherein the individual layers are creped and then combined with other creped or un-creped layers or to crepe multi-layered articles after the individual layers are combined, as taught by Lorenzi (refer to previous office action for complete discussion; specifically, column 17, lines 56-63).

Therefore, it would have been obvious to the skilled artisan at the time the invention was made to crepe the composite material of Zelazoski because such is known in the art, as taught by Lorenzi, wherein creping provides bulk, softness, enhanced ability to remove dirt, enhanced transport of air and water, compressive resiliency, and a visually pleasing appearance (Lorenzi; column 17, lines 56-60).

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Regarding claim 6, all the limitations were addressed above with respect to claim 1 except creping the non-woven before it is bonded to the film. It would have been obvious to the skilled artisan at the time the invention was made to crepe the non-woven of Zelazoski before bonding it to the film because such is known in the art, as taught by Lorenzi, wherein creping provides bulk, softness, enhanced ability to remove dirt, enhanced transport of air and water, compressive resiliency, and a visually pleasing appearance (Lorenzi; column 17, lines 56-60).

Regarding claim 7, Zelazoski teaches such (p. 9, line 31 – p. 10, line 7).

Regarding claim 8, Zelazoski teaches stretching either the film or non-woven before bonding it to the other layer (p 14, line 19 – p. 15, line 15).

Regarding claims 9-10, the amount of stretching would have been within purview of the skilled artisan at the time the invention was made.

With respect to claims 27-29, if it is not taken that Zelazoski teaches creping the first layer, as set forth by the examiner in paragraph 9 above, it would have been obvious to the skilled artisan at the time the invention was made to first layer of Zelazoski because such is known in the art, as taught by Lorenzi, wherein creping provides bulk, softness, enhanced ability to remove dirt, enhanced transport of air and water, compressive resiliency, and a visually pleasing appearance (Lorenzi; column 17, lines 56-60).

14. Claims 8-10 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zelazoski et al. and Lorenzi et al. as applied to claims 6 and 27 above, and further in view of Jacobs.

Regarding claims 8 and 28, it is noted the examiner has been relying on several embodiments disclosed in the Zelazoski reference which teach 1) stretching either the non-

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woven or film and releasing the tension to shrink the layer, 2) heat-shrinking either the non-woven or film and 3) stretching either the non-woven or film and releasing the tension to shrink the layer in addition to heat-shrinking which ever layer was not stretched (p. 14, line 19 – p. 15, line 15).

Although the claimed invention is not limited to stretching the layer that is also heat-shrunk and this layer being the film layer, the examiner would like to expedite prosecution and therefore set forth that such would have been obvious to the skilled artisan in either the 2nd or 3rd embodiments taught by Zelazoski because such is known in the art, as taught by Jacobs (see paragraph 11 above for complete discussion), wherein stretching the film layer improves the heat-shrinking properties thereof.

Regarding claims 9-10, the amount of stretching would have been within purview of the skilled artisan at the time the invention was made. However, it would have been obvious to stretch the film in a machine direction to about 1 to 6 times its original length because such is known in the art, as taught by Jacobs (column 4, lines 43-45).

Response to Arguments

15. Applicant's arguments filed 12/27/04 have been fully considered but they are not persuasive.

16. The examiner points out that Lorenzi is only being used to show that it is known in the art to make a fluid-permeable structured composite from non-woven and film layers wherein the individual layers are creped and then combined with other creped or un-creped layers or to crepe multi-layered articles after the individual layers are combined.


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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **571-272-1223**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine R. Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jessica L. Rossi
Art Unit 1733